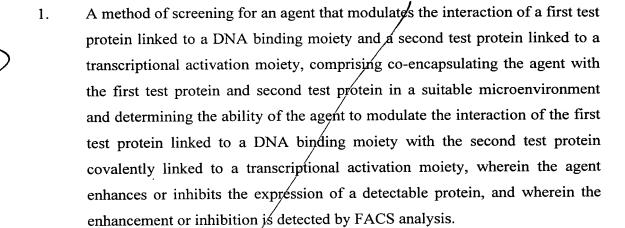
What is claimed is:



- 2. The method of claim 1, wherein the agent is an enzyme or small molecule.
- 3. The method of claim 2, wherein the enzyme is selected from the group consisting of lipases, esterases, proteases, glycosidases, glycosyl transferases, phosphatases, kinases, mono- and dioxygenases, haloperoxidases, lignin peroxidases, diarylpropane peroxidases, epozide hydrolases, nitrile hydratases, nitrilases, transaminases, amidases, and acylases.
- 4. The method of claim 1, wherein the agent inhibits the activity of the first protein or the second protein.
- 5. The method of claim 1, wherein the agent enhances the activity of the first protein or the second protein.
- 6. The method of claim 1, wherein the agent is expressed from a recombinant cell co-encapsulated with the recombinant cell expressing the target protein and detectable marker.
- 7. The method of claim 6, wherein the recombinant cell is a eukaryotic cell.





8. The method of claim 6, wherein the recombinant cell is a prokaryotic cell.

- 9. The method of claim 1, wherein the micro-environment is a liposome, gel microdrop, bead, agarose, cell, ghost red blood cell or ghost macrophage.
- 10. The method of claim 9, wherein the liposomes are prepared from one or more phospholipids, glycolipids, steroids, alkyl phosphates or fatty acid esters.
- 11. The method of claim 10, wherein the phospholipids are selected from the group consisting of lecithin, sphingomyelin and dipalmitoyl.
- 12. The method of claim 10, wherein the steroids are selected from the group consisting of cholesterol, chlorestanol and lanosterol.
- 13. The method of claim 1, wherein the detectable marker is a fluorescent dye, a visible dye, a bioluminescent material, a chemiluminescent material, a radioactive material, or an enzymatic substrate.
- 14. The method of claim 13, wherein the bioluminescent material is green fluorescent protein (GFP) or red fluorescent protein (RFP).
- 15. The method of claim 13, wherein detestion of the fluorescent dye or a visible dye is carried out by fluorometric or spectrophotometric measurement.

add bis

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